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Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554
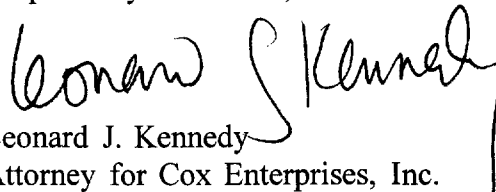
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OCT - 5 1994

Re: Ex Parte Meeting 92
     MM Docket No. 92-266

Dear Mr. Caton:

On behalf of Cox Enterprises, Inc. and pursuant to Section 1.1206(a) of the Commission's Rules, this letter will constitute notice that on Thursday, September 29, 1994, the attached paper was provided to Kathleen M. H. Wallman, Deputy Chief Cable Services Bureau, Lisa B. Smith, Legal Advisor to Commissioner Barrett, Mary McManus, Legal Advisor to Commissioner Ness and Maureen O'Connell, Legal Advisor to Commissioner Quello.

Should any questions arise in connection with this notification, please do not hesitate to contact the undersigned.

Respectfully submitted,

Leonard J. Kennedy
Attorney for Cox Enterprises, Inc.

LJK/rlf
Attachment

cc: Alexander V. Netchvolodoff
    Kathleen M. H. Wallman, Esq.
    Lisa B. Smith, Esq.
    Mary McManus, Esq.
    Maureen O'Connell, Esq.

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COX
ENTERPRISES,INC.   1320 Nineteenth Street, N.W., Suite 200   Washington, D.C. 20036   (202) 296-4933

Alexander V. Netchvolodoff
Vice President of
Public Policy

September 29, 1994

Kathleen Wallman
Cable Services Bureau
Federal Communications Commission
2033 M. Street, NW Room 918
Washington, D. C. 20554

Dear Kathy:

In our recent visit about the going forward provisions in cable regulation, I mentioned to you that Cox regards a la carte packaging in a world of 500 channels as an essential way to connect with our customer. Ajit Dalvi, Cox's Senior Vice President for marketing and programming in our cable division, has written a monograph on the subject which you expressed an interest in seeing. Enclosed is a photocopy.

Sincerely,

Alexander V. Netchvolodoff

Enclosure

cc: Len Kennedy

COX
ENTERPRISES,INC. 1320 Nineteenth Street, N.W., Suite 200 Washington, D.C. 20036 (202) 296-4933

Alexander V. Netchvolodoff
Vice President of
Public Policy

September 29, 1994

Lisa Smith
Legal Advisor
Commissioner Andrew Barrett
Federal Communications Commission
1919 M. Street, NW
Washington, D. C. 20554

Dear Lisa:

   In our recent visit about the going forward provisions in cable regulation, I
mentioned to you that Cox regards a la carte packaging in a world of 500 channels as an
essential way to connect with our customer. Ajit Dalvi, Cox's Senior Vice President for
marketing and programming in our cable division, has written a monograph on the subject
which you expressed an interest in seeing. Enclosed is a photocopy.

                                        Singerely,

                                        Alexander V. Netchvolodoff

Enclosure

cc: Len Kennedy

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Alexander V. Netchvolodoff
Vice President of
Public Policy

September 29, 1994

Maureen O'Connell
Legal Advisor
Commissioner James H. Quello
Federal Communications Commission
1919 M. Street, NW
Washington, D. C. 20554

Dear Maureen:

In our recent visit about the going forward provisions in cable regulation, I mentioned to you that Cox regards a la carte packaging in a world of 500 channels as an essential way to connect with our customer. Ajit Dalvi, Cox's Senior Vice President for marketing and programming in our cable division, has written a monograph on the subject which you expressed an interest in seeing. Enclosed is a photocopy.

Sincerely,

Alexander V. Netchvolodoff

Enclosure

cc: Len Kennedy

COX
ENTERPRISES,INC. 1320 Nineteenth Street. N.W., Suite 200 Washington, D.C. 20036 (202) 296-4933

Alexander V. Netchvolodoff
Vice President of
Public Policy

September 29, 1994

Mary McManus
Legal Advisor
Commissioner Susan Ness
Federal Communications Commission
1919 M. Street, NW
Washington, D. C. 20554

Dear Mary:

     In our recent visit about the going forward provisions in cable regulation, I mentioned to you that Cox regards a la carte packaging in a world of 500 channels as an essential way to connect with our customer. Ajit Dalvi, Cox's Senior Vice President for marketing and programming in our cable division, has written a monograph on the subject which you expressed an interest in seeing. Enclosed is a photocopy.

                        Sincerely,

                        Alexander V. Netchvolodoff

Enclosure

cc: Len Kennedy

What Are We Going To Do With 500 Channels?

By Ajit Dalvi
Senior Vice President
Marketing &
Programming
for Cable
Communications

The world of digital compression will be with us soon. Ajit Dalvi examines television's past and offers a model for a 600-channel capacity system. Dalvi feels it would be a mistake to simply offer more channels or choices. Rather, Dalvi says that the new technology will gain consumer acceptance quickly if it accommodates the way people are used to watching TV; if it gives them not just more programs, but instant access to those programs; and if it creates a linkage between the world of branded channels and the world of discreet program selection.

That the combination of fiber optics and video compression will give us an abundance of channels is no longer in doubt. The last two years in our business have been full of excitement – some might say even hype – about the new technology. Terms like video-on-demand, full service networks, video compression, file servers and interactivity have become a part of the everyday vocabulary. Unquestionably, we are on the brink of a new era in the world of cable TV technology.

A Technology in Search Of Applications?

However, there is still a lack of clarity about how the technology may be used to deliver a better value to our customers and higher revenues and profits for the cable operator. There is a tendency to assume that once the technology becomes available, somehow, it will be easy to find a way to use it simply by offering more TV – more channels – more multiplexing – more of everything.

The unavoidable question is – where is the "more" going to come from? What are we going to show on the 500 channels? Will we to continue to see a proliferation of programming services? Where is

the programming for the new channels going to come from? How much is it going to cost? Will the weekly program guide for a 500-channel system resemble the Yellow Pages in Manhattan? Do our customers really want 500 channels? And last but not least, do they want them badly enough to willingly pay for the incremental cost of the technology and programming?

It behooves us to try to answer these questions well before the technology actually arrives on the scene. The cable industry will have to work towards a common vision about the applications of the new technology, because without such a common vision, much of the software development (i.e. development of programming, its satellite distribution to the headends and the computer software necessary to support a more complex product-offering) could well lag behind the hardware capabilities. This could potentially have disastrous consequences in terms of the return o the huge investment in the new technology.

If this appears to be an unnecessarily alarmist view one need only look back on how the industry introduced addressability. Several years ago, this technology was launched without a clear vision about the support system necessary to build the pay per view business. There was a time when many of us acted as if placing the addressable converters in subscribers' homes would by itself create the pay per view business. When that did no happen, a certain amount of disenchantment about the addressable technology and about the potential of pay per view set in. Unless we focus o developing a common vision about the applications of the next round of technology, we risk repeating this history.

This article presents a "model" for programming a 600-channel cable system. I am using 600 channels as a metaphor of a channel-rich cable system and not as a literal representation of what is expected to happen in the short run. In so doing, the primary purpose is to highlight a conceptual framework for using the abundance of channel capacity to deliver a better value to cable subscribers. We will build this framework by first looking at the evolution of television in this country; the reasons why cable TV has been so successful. and the reasons why there is a degree of customer dissatisfaction about today's cable TV offering. This last issue – the reasons why our customers are not completely happy with today's cable TV – is probably the most important one: the seeds of today's customer discontent can point towards the next logical step in the evolution of the medium.

From Mass Appeal to Niche Appeal

The 70's were the golden age of the broadcast networks. This was also the age of TV with a mass appeal. The networks had no use for programs that did not appeal to a broad cross-section of the population. Due to limitations on spectrum availability for terrestrial TV and resulting constraints on the number of broadcast channels, there was no economic justification for limited appeal programs. With limited air-time and advertising sales as the sole source of revenue. the broadcast stations could maximize their revenue only by showing programs that had a mass appeal.

The cable TV technology which was already developed by the early '70s had the ability to expand the channel capacity, but the industry lacked the critical mass of subscribers except in the "reception" markets.

Then, several developments – including the removal of restrictions on the carriage of distant broadcast stations and the transformation of HBO and WTBS as satellite-delivered services – allowed cable to attain a critical mass of subscribers. Armed with the critical mass, now cable could use its abundant channel capacity to provide programming formats that were not sufficiently broad-based to be of interest to broadcast stations. This was the birth of narrowcasting and clearly, the expanded channel capacity was the single most important force behind it.

However, the technology alone did not cause the invention of the two-revenue stream model which made basic cable programming services economically viable despite the low viewership levels inherent to narrowcasting. Cable programmers got advertising dollars from delivering niche audiences with much greater efficiency. And they also received license-fee payments from operators who needed the programming to give their customers a reason for subscribing to cable. This was the beginning of a new renaissance in programming. For the first time, programming concepts that had no chance of delivering mass audiences became available on television. The order of the day was 24-hour news. 24-hour music videos. 24-hour documentaries, and of course. 24-hour movies. The age of niche programming was upon us. The needle had moved from the programming with mass appeal to the programming with niche appeal: and in the ultimate analysis. it was the expansion of channel capacity that nudged the needle to move. Interestingly. once again. we are about to make a quantum leap in channel capacity. and therefore find ourselves at the crossroads with respect to innovation in programming formats.

"Will the weekly program guide for a 500-channel system resemble the Yellow Pages in Manhattan?"

What Are We Going To Do With 500 Channels

What Was Different About Cable TV?

How did the consumers benefit from the new age of multichannel programming made possible by cable TV? Was it simply the variety of programming that was appealing to them? The broadcast networks were not exactly lacking in variety. *The big difference cable made was that it made the variety easily – in fact, instantly – accessible.* If you wanted news, you no longer needed to wait until 7 p.m.; it was there any time you wanted it. The same was true for many other kinds of programming.

This was the age of instant access to the programming genre of the viewer's choice – a benefit that over-the-air television simply was unable to provide. The available choices increased as cable programmers continued to bring forth more and more new niche and sub-niche services. For example, first there was only CNN – a 24-hour general news service. Then came FNN for financial news, the Weather Channel for the news about weather, E! TV to cover showbiz news, regional news networks, and on and on. Just when you think that we may have run out of channel ideas, somebody comes up with one more new channel.

The Limits of Channel Proliferation

Is there a limit to this channel proliferation? There has to be an economic limit – because at some point, the remaining niches may get too limited in their consumer appeal to be economically viable. *In this case, the programming cost per viewer is likely to exceed the price the consumer is willing to pay, making exploitation of that niche unprofitable.* Until we reach this point,

channels will continue to proliferate. You need only look at the magazine rack in a typical news stand to appreciate the potential for special interest media. In many ways, the array of channels on a cable system is just like a magazine rack. But it is important to recognize that the analogy of the magazine rack has a limited applicability to cable channels. It costs much more to program a 24-hour channel than a 100-page magazine. The implication is that the magazine industry can probably cater to market-niches that may be too small for cable channels to explore profitably.

Easier Access To Quality Programs

Although new programming ideas will continue to be spawned for some time to come, we are not going to have 600 new programming services in the next two years – or for that matter, ever. Then what do we need 600 channels for? The answer lies in the most common complaint from cable subscribers: *"Despite all these different channels, when I am in the mood to watch TV, many time there is simply nothing on that I really want to watch."*

What does this really mean? Is it simply a matter of our customers being unaware of all the large quantities of very attractive and diverse programming we provide every month of the year? Not necessarily. It simply means that we have succeeded in providing instant availability of the programming genres of choice – but the "high quality programming" within the genre of choice is still not available on an instantaneous basis. We can give you a movie almost any time you want – but we cannot guarantee that it's going to be a movie you wanted to watch.

Any new technology is created to solve consumers' "problems." How can we use the new technology that gives us 600 channels to overcome the problem we hear about from our customers everyday – the problem of not being able to access the most "watchable" programs on cable when they have the time and the inclination to watch them? The following channel-map for our 600-channel system is designed with this in mind. It is designed to make our customers' viewing experience truly enjoyable.

Programming Model for a 600-Channel System

First, let us overview the map of our 600-channel system. We will divide the channels into four major zones. Our first zone is what we might call "*The Grazing Zone.*" It includes 100 channels, which is enough to accommodate all basic and pay cable networks, as well as all of the locally available broadcast stations. The Grazing Zone is almost a complete replication of today's cable system.

We will call our second zone "*The Quality Zone.*" It includes 200 channels: every programming service represented in Zone-1 (the Grazing Zone) will have two dedicated channels in the Quality Zone. For example, we have The Discovery Channel in the Grazing Zone, so we will have two additional channels for Discovery in the Quality Zone: let us call these two channels "The Best of Discovery." Similarly, we will have two channels for the best of Comedy Central, and two channels for the best of TNT – and so on. On a given day, each "Best Of" channel will run only one program for 24-hours on a continuous basis. This will be the highest-rated program from the "Mother Channel" from the previous day or the previous week. Obviously, the second dedicated channel will show the second highest rated program from the "Mother Channel."

Why do we link the "Quality" channels with the branded channels in the Grazing Zone? Why not "the best of documentaries" channel instead of "the best of the Discovery Channel"? This is because the brands are fundamental to the business of cable TV. Brands like MTV, Discovery and ESPN are more than just the names of program packages. Programs come and go; but the brands remain etched in consumer's mind. The new technology must find a way to build on brands rather than supplant them. It is possible to get carried away by statements like "people don't buy channels – they buy programs." *Consumer will be confused beyond belief if TV suddenly becomes a machine for accessing thousands of discrete programs – an analog of a video store.* We can avoid this confusion by creating a linkage between the world of branded channels and the world of discrete program selection. The quality zone in our channel-map tries to built this linkage.

The 200 channels in the "Quality Zone" will have staggered starts, five minutes apart. For the sake of simplicity, if we assume that all of these programs are of one hour duration, then any time you tune in, in the next five minutes, you will have an opportunity to access at least 20 of the best programs shown the previous day. This is near-instant *access to quality programming* – something the viewer does not have in today's world. And if you are prepared to wait five more minutes, you will have 20 more programs to choose from. We will make the programs in the Quality Zone available on a very low-priced pay per view basis. Each program will cost only a dollar, and the revenues will, of course, be shared with the rights holder for that program.

"...we are about to make a quantum leap in channel capacity, and... find ourselves at the crossroads"

What Are We Going To Do With 500 Channels?

Now, let's go to the third zone on our channel map. It consists of 50 channels, and we will call it *"Event TV."* It is reserved for carrying live events on pay per view basis, and that includes every NFL game every Sunday, every Major League baseball game, championship boxing and music concerts. This is big ticket pay per view, costing anywhere between $10.00 and $30.00 – depending on the type of event.

Now we come to the fourth and last zone on our map – this is cable's equivalent of a video store. We have reserved 250 channels, and the way we are going to schedule movies on it is bound to give your local Blockbuster store a run for its money. We will show *each* of the top six titles for the month on 12 channels, with the start time 10 minutes apart. This will ensure that for the most popular newly-released titles, you will never wait for more than 10 minutes. The next 10 most popular titles will be shown on 80 channels. That means no more than a 15-minute wait for the start time for any of these 10 titles. Then we will have additional 24 movies on four channels each which will ensure a less than 30-minute wait for any one of these titles, no matter when you tune in.

Why will this format be competitive with video stores? Have you ever tried to rent a newly-released hit movie from a video rental store? If you have, you know that it is a futile exercise. In contrast, our cable video store will be in a position to guarantee availability of top titles within minutes. Why would you then go to the video stores to rent these movies when you can get them in your living room without any hassle whatsoever? Top titles provide nearly 60% of video rental store's $11

billion annual revenue. Our video-on-demand format can help us capture at least half of the revenue generated by the hit titles.

So, what are we using the new technology for? We are not using it to drown our customers in new programming that they did not ask for. *We are using it to improve our customers' access to quality programming.* In fact, if used in this manner, the new technology can be beneficial to our customers even if no new programming services are created to fill the 600 channels. Does this application of the technology really provide value to customers? Are we trivializing a powerful technology by using it to provide easy access to "yesterday's" programs, as opposed to "new" programs? Over the past few years, the number of high quality programs shown on the various cable channels has increased tremendously. And yet, hardly any of these programs ever get higher than 3 or 4 rating. Even after you take the repeats into account, some of cable's best programming is seen by no more than 10% to 15% of the subscriber universe. This is not because the remaining 90% of our subscribers are not interested in these programs. It is because watching cable has become a hit-or-miss game. Unless you are a painstaking student of cable guides, you find the best of cable by default – not by design. The net result is that we consistently suboptimize the satisfaction of our customers. The bottom line is that making it easy to access the *highest quality programs* is providing real value to our customers – it is as important as making the programs available in the first place.

How will Our Customers Find What's On Channel 599?

How are our customers going to find the programs of their choice in the jungle of 600 channels? Clearly, all of the existing methods of providing program information to our customers – including newspaper listings and program guides – simply cannot deal with so much information. The only way to deal with this information explosion is with a real-time. "interactive" electronic program guide. Let me demonstrate (if one can do such a thing in the print format) how such an interactive guide may work as a navigation tool.

Let us call this system EPIC™ – for electronic program information and control system. The system transmits the program information via satellite. The chip controlling the system resides in the desk-top box or in your TV set. and the viewer controls it with a very simple remote control unit (See Chart A). Note the absence of numbers on this remote: that is because in the 600-channel world, using channel numbers to navigate your TV dial is not a practical option. The track ball on the top is used to control the movement of a cursor on your TV screen. There are only nine other buttons on this remote – we want to keep it as simple as possible!

Chart A

Let us punch the start button. On comes a menu of the four zones (Chart B).

Chart B
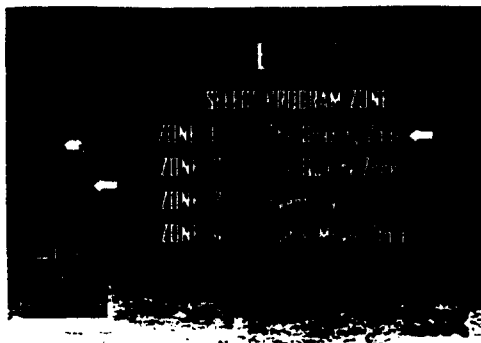
We want to be in the Grazing Zone – so move the cursor there and punch the select button. The system then asks you how you would like to graze (Chart C).

Chart C

Let us say we want the channel list. Move the cursor to CNBC – because that's what we want to watch. (Chart D). Punch the select button. and then the tune-in button. You immediately go to a program in progress on CNBC without ever needing to know what channel number it is on (Chart E). If you want to find out some information about the program in progress – simply punch the "info" button and on comes a screen to give you what you want (Chart F).

What Are We Going To Do With 500 Channels?
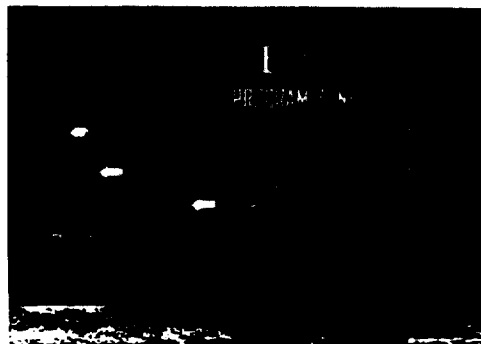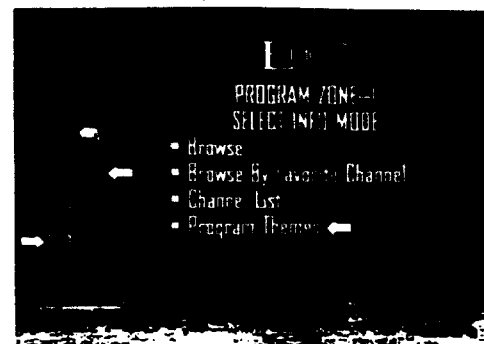
Chart D

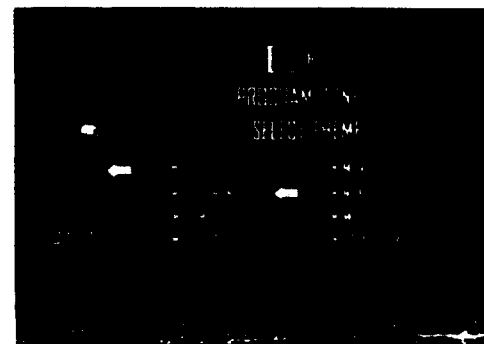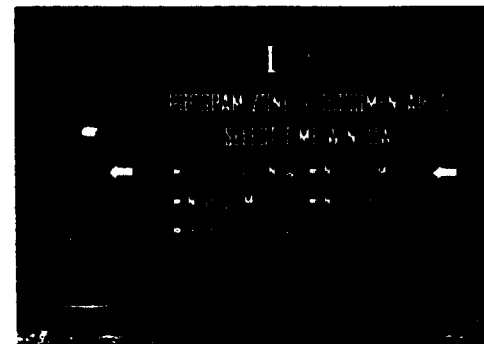
Chart G

Chart E

Chart H

Chart F

Chart I

Let us say, you do not want to browse: because you know exactly what type of program you are in a mood to watch – for example. a documentary. So. you select the "theme" option and you will get the menu of different program types (Chart G).

Select documentaries (Chart H) – then you select the time window (Chart I) – and instantaneously you get the list of documentaries slated to start in the next two minutes (Chart J).
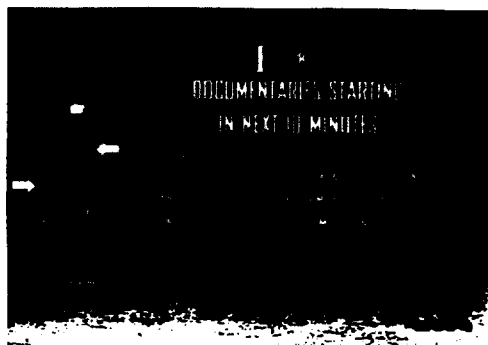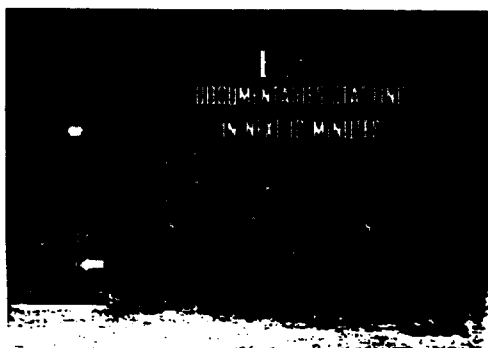
Chart J

Chart K

Once again. you make your selection. Punch the "info" button if you want more information – and if you like what you see. press the tune-in button (Chart K).

It is a system that is simple to use – it provides the information in real time – it gives you information only when you need it – and it enables you to deal with the vast number of options without overwhelming you. There is nothing very radical or original about the system I have described – the Starsight interactive guide is very similar to what I have described. *The main point is that instant access to the information about programs is as important as providing instant access to*

the programs themselves. In fact. without it. the explosion of channel capacity will serve no purpose.

V.O.D. Or Near V.O.D. – That Is Not The Issue!

What I have presented here is a near-video-on-demand model. How about video-on-demand? That will simply make the programs of choice available more quickly – instantaneously, as opposed to within minutes. The V.O.D. technology will be embraced if and when it can be cost-justified. i.e. if its benefits outweigh its cost. Whether it is video-on-demand or near-video-on demand is not the issue. The issue is what and how much programming do you provide through either technology and how do you make easy access to programs manageable for the consumer?

Since the file-server technology used to provide V.O.D. could store 5000 or more different programs. in many ways it will exacerbate the challenges. *There will be a strong temptation to "throw" more choices (as opposed to only "quality choices") at the consumer simply because the technology will permit us to do that.* However. presenting more choices without a structure in their presentation will be chaotic. and therefore. counterproductive. Moreover. marketers' axiomatic faith in the value of increasing the options available to the consumer as a sure-fire way of increasing consumption (in this case. the consumption of programming) will face its acid test with this technology. We already know that increasing the number of options has a diminishing marginal utility. Now we will have an opportunity to find out if the number of options can be increased to the point of creating negative marginal utility. After all. a thing called over-choice may in fact exist.

"...making it easy to access the highest quality programs is providing real value to our customers..."

What Are We Going To Do With 500 Channels?

What I have presented here is one way of harnessing the increased channel capacity – and providing a real benefit to our customers. *The 70s were the decade of mass TV, the 80s gave us niche TV, and now we have the opportunity to make the 90s the decade of quality TV: because the new technology has the capability making quality programming more accessible than ever before.* Unfortunately, the about-to-be-available channel capacity can also be used to take the concept of narrowcasting to its mind-numbing limits by launching 15 different music channels, seven or eight classic movie services and perhaps a channel of their own for left-handed golfers. This type of knee-jerk narrowcasting could fritter away an opportunity to provide a unique value to our customers. I am not suggesting that in the new world, all new channel launches should come to a complete halt. However, it would be a mistake to give our customers more "stuff" as opposed to more "quality."

Instant Access To Quality TV

Through the blueprint for a 600-channel system, I have tried to demonstrate that the new technology is not so much about making more programming available to TV viewers, as it is about providing instant access to quality programs. The new technology will get consumer acceptance quickly only if it accommodates the way people are used to watching TV in today's world. It must build on existing viewing habits, as opposed to trying to totally supplant them. Entrenched habits such as channel grazing will not go away – the new technology must find a way to accommodate them in a user-friendly way.

The real challenge of the new technology is making the vast variety of programs manageable – a thing called overchoice probably does exist, and overchoice will be counterproductive to the goal of using the new technology to give value to the consumer. Overchoice is presenting consumers with options without giving them the means of making an intelligent selection. It is providing options without organizing those options within a structure. It is giving options without providing the information necessary to make decisions.

This is why a system for providing easy access to programming information is a necessary ingredient of the upcoming bandwidth revolution. Ease of access to the information about programming must keep pace with the ease of access to programs themselves. ∎